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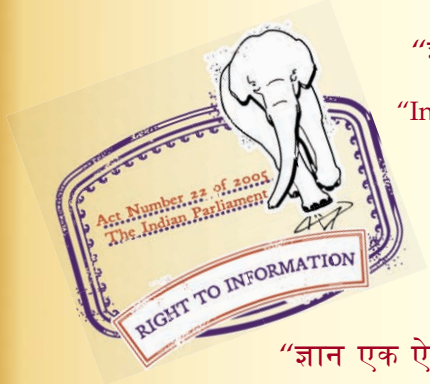

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जूता पालिश, पेस्ट — विशिष्टि

(तीसरा पुनरीक्षण)

Indian Standard

SHOE POLISH, PASTE — SPECIFICATION

(Third Revision)

First Reprint NOVEMBER 2000

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

July 1992

Price Group 3

Polishes Sectional Committee, CHD 023

FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Polishes Sectional Committee had been approved by the Chemical Division Council

This standard was originally published in 1960 and then revised in 1970 and 1985. The present revision has been undertaken to include the definition of ambient temperature, changing the requirement of shelf life and improving the test for consistency. The use of aluminium foil/waxed paper has also been made recommendatory only.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*).

AMENDMENT NO. 1 AUGUST 1993
TO
IS 1746 : 1992 SHOE POLISH, PASTE — SPECIFICATION

(Third Revision)

(*Second cover page, Foreword*) — Considering the international trade practices, on marking of polishes, the word paste is being deleted from the marking clause. It is, bowever, retained in the title to indicate its physical state.

[*Page* 2, *clause* **6.1** (c)] — Delete the word 'PASTE' wherever it occurs.

(CHD 023)

Printed at New India Printing Press, Khurja, India

Indian Standard

SHOE POLISH, PASTE — SPECIFICATION

(Third Revision)

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for paste polishes of the wax-solvent and wax emulsion types Suitable for general application to leather footwear and the other leather articles.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
82 : 1973	Method of sampling and test for thinners and solvent for paints (*first revision*)
1070 : 1977	Water for general laboratory use (*second revision*)
1448 (Part 20) : 1982	Methods of test for petroleum and its products : Part 20 Flash point by Abel apparatus (*first revision*)
4905 : 1968	Methods for random sampling
5241 : 1969	Shoe polish containers (*first revision*)
5741 : 1970	Methods for determination of *p*H
8171 : 1984	Glossary of terms relating to polishes and related materials

3 TERMINOLOGY

3.1 For the purpose of this standard the definitions given in IS 8171 : 1984 and the following shall apply.

3.1.1 *Ambient Temperature*

It is the temperature between 21°C and 38°C.

4 REQUIREMENTS

4.1 Description

4.1.1 *Odour*

The material shall not have any disagrecable and objectionable odour.

4.1.2 *Colour*

The material shall be manufactured in conventional colours like black, tan (light brown), dark tan (dark brawn) or natural, closely matching the colour of the leather footwear, or in any other colour as agreed to between the purchaser and the manufacturer in case of bulk contract.

4.1.3 *Consistency*

The material shall be smooth, homogeneous semi-solid mass, free from gritty material. It shall not flow at ordinary temperatures, or show appreciable shrinkage at edges. It shall have no tendency for the separation of solvents or crystallization of the constituent materials when. tested as prescribed in Annex A.

4.1.4 *Applicability*

The polish shall not crumble or dry too rapidly and shall produce a non-tacky polished surface when tested as prescribed in Annex B.

4.1.5 The polish shall be amenable to smooth spreading on the upper shoe leather and the gloss shall appear on gentle rubbing with a brush or polishing cloth.

4.1.6 *Colour of Water Extract*

When 1 g of polish is stirred with 100 ml of water mamtained at 75 ± 2°C, the aqueous extract shall have not more than faint colouration.

4.2 The material shall also comply with requirements given in Table I.

Table 1 Requirements for Shoe Polish, Paste

Sl No.	Characteristic	Requirement	Method of Test (Ref to Annex)
(1)	(2)	(3)	(4)
1)	Softeing point of non-volatile matter, *Min*	60°C	C
ii)	Ash of the non-volatile matter, percent by mass. *Max*	2.5	D
iii)	*p*H of water extract	6.5 to 9.0	E
iv)	Distillation range of volatile portion	123 to 240°C	F
v)	Flash point of volatile portion, *Min*	30°C	F
vi)	Non-volatile matter, percent by mass	20 to 35	G

4.3 Shoe polish manufactured under this specification shall conform to the requirement thereof for one year from the date of manufacture when stored in its original sealed containers under cover at ambient temperature.

4.4 Special Requirement for Defence Supplies

The material shall not ooze out from the container and stain the filter paper when tested as per method given in Annex H.

5 PACKING

5.1 The polish shall be supplied in sound, clean and dry, rustproof metal containers, preferably press lid type (*see* IS 5241 : 1969). The container shall be fitted with a lid which may be closed or opened without much difficulty and which shall prevent evaporation of the solvent and the ingress of dirt.

5.2 When filled, the surface of the polish in the container may be covered with a thin aluminium foil or waxed paper, the size of which shall be slightly bigger than the diameter of the container so that the foil overlaps the container and ensures tight fit when the lid is in position.

5.3 The size of the containers shall be preferably 15 g or 40 g or as agreed to between the purchaser and the manufacturer.

5.4 The containers shall be packed in cartons and the cartons in turn, in cardboard or wooden boxes or as agreed to between the purchaser and the manufacturer.

6 MARKING

6.1 The following information shall be clearly indicated on the outside of the container:

a) Manufacturer's name and his trade-mark, if any;
b) The net mass of the material when packed;
c) The words 'BOOT POLISH, PASTE' or 'SHOE POLISH, PASTE';
d) Colour of the polish; and
e) Month and year of manufacture.

NOTE— Any other marking required under Weights and Measures (Packaged Commodites) Regulations, 1977 may also be given.

7 SAMPLING

The method of drawing representative samples of the material and the criteria for conformity shall be as prescribed in Annex J.

8 TEST METHODS

8.1 The material shall be tested as prescribed in annexes to this standard.

8.2 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (see IS 1070 : 1977) shall be used in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

ANNEX A

(*Clause* 4.1.3)

DETERMINATION OF CONSISTENCY

A-1 PROCEDURE

A-1.1 Maintain an original unopened container of polish at 10 ± 2°C for two hours. Open the lid and examine as given in **A-1.1.1** and **A-1.1.2.**

A-1.1.1 No liquid shall separate from the semi-solid mass.

A-1.1.2 The polish shall be soft and smooth to touch and capable of being token up readily with a brush or cloth without crumbling.

A-1-2 Repeat the above series of examinations on another container maintained at a temperature of 45 ± 2°C for two hours.

A-1.2.1 The material shall not flow or run if the container is tilred to an angle of 30°.

A-1.2.2 The separation of a few drops of the solvent shall not be considered a failure to meet this test, if they are re-absorbed when the paste is brought to ordinary temperature.

A-1.3 Close the containers for use in tests given in Annex F.

ANNEX B

(*Clause* 4.1.4)

DETERMINATION OF APPLICABILITY

B-1 PROCEDURE

B-1.1 Leather upper piece of size 150 × 150 mm of nearly the same colour as the polish shall be used for testing. The piece shall be smooth and mall finished (non-glossy) on the grain side.

B-1.2 Clean the grain surface with a cloth or brush to remove any adhering dust particles. Apply the polish in a thin film to the smooth grain surface using a rag or brush and examine after two minutes for the characteristics described in **B-1.2.1** and **B-1.2.2.**

B-1.2.1 Examine the polished leather piece for gloss visually. In case an approved sample of the polish is available, polish a similar piece of leather and match the gloss obtained with the test sample with that of the approved sample.

B-1.2.2 Place the leather piece (*see* **B-1.2**), which has been allowed to dry for 5 minutes on the pan of a suitable physical balance and counterpoise it with weight. Place an additional weight of 2.5 kg and press the polished surface with thumb till the two pans of the balance are counterpoised. Keep the thumb in this position for one minute and then slowly release.

B-1.2.2.1 There shall be no sign of stickness of the thumb. The thumb impression, if produced, shall be such that it shall be wiped out with a cloth or brush

ANNEX C

[*Table* 1., *Sl No.* (i)]

DETERMINATION OF SOFTENING POINT OF NON-VOLATILE MATTER

C-1 APPARATUS

C-1.1 Porcelain Crucible

C-1.2 Thermometer

sensitive to 0.l°C.

C-2 PROCEDURE

Heat about 20 g of material in an open dish on a steam-bath for 4 hours and then in an air oven at 115 ± 2°C for about 16 hours. Cool and place about 50 rag of it on the surface of clean mercury, preferably freshly distilled, contained in a clean and dry porcelain crucible. Place the crucible on the sand bath and hang vertically the thermometer and adjust its height in such a way that the bulb of the thermometer dips in the mercury. Heat the sand bath slowly. After the thermometer reaches about 55°C, raise the temperature at the rate of 1°C per minute. Shift the material on mercury with the tip of an ord inary pin after every one degree rise. Note the temperature when the material on being shifted shows a clear separation of molteu wax from the rest of the mass; a slight haze on the surface of mercury should be ignored. Note this temperature as the initial temperature of softening.

ANNEX D

[*Table* 1, *Sl No.* (ii)]

DETERMINATION OF ASH OF NON-VOLATILE MATTER

D-1 PROCEDURE

D-1.1 Weigh accurately about 2 g of the non-volatile matter as obtained in **C-2.1** in a tared porcelain crucible. Ignite to constant mass, taking care that the cooling before each weighing is done in a desiccator.

D-2 CALCULATION

Ash of non-voltile matter, percent by mass $= \frac{B \times 100}{A}$

where

B = mass in g of the ash, and

A = mass in g of the non-volatile residue.

ANNEX E

[*Table* 1, *Sl No.* (iii)]

DETERMINATION OF *p*H OF WATER EXTRACT

E-1 PROCEDURE

Add about 15 g of the material to 100 ml of water in a beaker. Heat with stirring to about 80°C till all the wax has melted. Allow to cool to a temperature of 27 ± 2°C. Separate the aqueous layer from the wax cake and determine its *p*H-meter with a glass electrode (*see* IS 5741 : 1970).

ANNEX F

[*Clause* A-1.3 and *Table* 1, *Sl No.* (iv) *and* (v)]

DETERMINATION OF DISTILLATION RANGE AND FLASH POINT OF VOLATILE PORTION

F-1 PROCEDURE

F-1.1 Place about 400 g of the material m a suitable distillation flask and distil off the solvent in vacuum. Dry the distillate by shaking with anhydrous magnesium sulphate.

F-1.2 Determine the distillation range of the distillate as obtained in **F-1.1** by the method given under 7 of IS 82 : 1973.

F-1.3 Determine the flash point of the distillate as obtained in **F-1.1** by the method given in IS 1448 (Part 20) : 1982.

ANNEX G

[*Table* 1, *Sl No.* (vi)]

DETERMINATION OF NON-VOLATILE MATTER

G-1 PROCEDURE

G-1.1 Weigh accurately about 3 g of the sample in a tared flat-bottomed dish of approximately 8 cm diameter provided with a cover. Heat without the cover, on a steam-bath till the bulk of the volatile matter is volatilized off, and then in an air-oven at 115 ± 2°C for about 4 hours. Cool and weigh. Repeat heating and cooling till the last two weighings differ by not more than one milligram.

G.1.2 Calculation

Non-volatile matter, percent by mass $= \frac{B \times 100}{A}$

where

B = mass in g of the non-volatile residue, and

A = mass in g of the sample taken for test.

ANNEX H

(*Clause* 4.4)

OOZING TEST

H-1 PROCEDURE

Place original and unopened container as tendered of polish over a sheet of clean, white filter paper and keep the assembly in an air-oven at 44 ± 2°C for 2 hours. Examine the container for oozing of polish and filter paper for any stain caused by the oozed material.

ANNEX J

(*Clause* 7)

SAMPLING OF SHOE POLISH, PASTE

J-1 GENERAL REQUIREMENTS OF SAMPLING

J-1.0 In drawing, preparing, storing and handling test samples, the following precautions and directions shall be observed.

J-1.1 Samples shall he taken in a protected place not exposed to damp air, dust or soot.

J-1.2 The sampling instrument shall be clean and dry when used.

J-1.3 Precautions shall be taken to protect the samples, the material being sampled, the sampling instrument and the containers for samples from adventitious contamination.

J-1.4 To draw a representative sample, vertical sections of the polish at uniformly placed points shall be taken and mixed as thoroughly as possible by suitable means.

J-l.5 The samples shall be placed in clean, dry and air-tight glass or other suitable containers, on which the material has no action.

J-1.6 The samples containers, shall be of such a size that they ace almost completely filled by the sample.

J-1.7 Each sample container shall be sealed air-light after filling and marked with full details of sampling, the date of sampling and the month and year of manufacture of the material.

J-1.8 Samples shall be stored in such a manner that the temperature of the material does not vary unduly From the normal temperature.

J-2 SCALE OF SAMPLING

J-2.0 Samples of determine the conformity of a consignment of shoe polish, paste to this specification, shall be selected so as to be representative of the consignment and for this purpose the consignment should be made up of homogeneous lots.

J-2.1 Lot

All the containers in a single consignment of the material drawn from the same batch of manufacture and belonging to the same size shall constitute a lot. If a consignment is declared or known to consist of different batches of manufacture or of different sizes of containers, the containers belonging to the same batch and size shall be grouped together and each such group shall constitute a separate lot.

J-2.1.1 Samples shall be tested for each lot for ascertaining the conformity of the material to the requirements of this specification.

J-2.2 The number (*n*) of containers to be chosen from the tot shall depend upon the size of the lot and shall be in accordance with col 1 and 2 of Table 2.

Table 2 Number of Containers to be Selected for Sampling

Lot Size *(N)*	No. of Containers to be Chosen
(1)	(2)
Up to 500	10
301 ro 1 000	15
1 001 and above	20

J-2.2.1 In addition to the number of containers chosen m **J-2.2**, an additional number of containers shall be selected from each lot so as to determine consistency on unopened containers and to 400 g of the material for determination of the distillation range and flash point of the volatile portion of the rnaterial.

J-2.3 These containers shall be chosen at random from the lot; in order to ensure the randomness of selection, some random number table, as agreed to between the purchaser and the supplier, shall be used. For random selection procedures, IS 4905 : 1968 may be referred to.

J-3 PREPARATION OF COMPOSITE TEST SAMPLE

J-3.1 Draw with a cork borer of approximately 2 cm in diameter, hole vertical sections of the material, from severel different points of the surface of the opened containers selected according to **J-2.2**. The total quantity of material drawn from each container shall be the same and shall not exceed 10 g.

J-3.2 Thoroughly mix below 45°C with a mechanical stirrer all the portions of the material drawn from different containers so as to form a composite test sample weighing not less than 100 g.

J-4 NUMBER OF TESTS AND CRITERION FOR CONFORMITY

J-4.1 The consistency shall be determined on unopened containers selected according to **J-2.1.1**. After the determination of consistency, about 400 g of the material shall be collected from the containers and shall be used for the determination of distillation range and flash point of the volatile portion of the sample.

J-4.2 Tests for the determination of other characteristics given in the standard (*see* **3** and Table 1) shall be conducted on the composite sample.

J-4.3 The lot shall be declared as conforming to the requirements of this specification, if the test results as obtained under **J-4.1** and **J-4.2** satisfy the corresponding requirements.

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